Leukotrienes and other Lipoxygenase Products

Edited by P.J. Piper

Research Studies Press, John Wiley and Sons; Chichester and New York, 1983
xiv + 353 pages. £19.50

This useful and important book ought certainly to find its way onto the shelves of all those involved in research on prostaglandins and leukotrienes as wel as into most pharmacology libraries. This is because it is a valuable update on leukotriene research in the period 1981–82 (much happened in that short time) and is a convenient source of much of the earlier background work.

In fact, this is the second volume in the so-called *'Prostaglandin Series'* to be devoted to leukotrienes, and, like the earlier one, contains the proceedings of a conference held at the Royal College of Surgeons, London. The first meeting was held in 1980, to coincide with the period when the structures of the various slow reacting substances (peptidolipid leukotrienes) and their biosynthetic sequences had been more or less established.

During the ensuing two years many more investigators became busy in the field – some would say jumped on the bandwagon – and have started an exhaustive study of the properties and possible physiological relevance of these mediators. Indeed, the volume of literature on lipoxygenase products promises soon to rival that on prostaglandins.

With 43 contributions, the present book reviews the chemistry and synthesis of leukotrienes and deals with one of several recently developed methods of radioimmunoassay, as well as providing a preliminary report of fast atom bombardment mass spectrometry of leukotrienes. Equally applicable to other eicosanoids such as the classical prostaglandins and sensitive at the microgram level, this powerful technique obviates the need for sample derivatisation. There are also important contributions on mast cell heterogeneity, immunocytochemical localisation of LTC_4 and stability of leukotrienes, as well as several papers on their cardiovascular and pulmonary actions and release in various disease models.

However, progress towards two potential matchwinners remains tantalisingly slow. These are the development of specific leukotriene antagonists and specific leukotriene synthesis inhibitors. There are a number of useful leads (some of them dealt with here), but perhaps one day soon a chance finding will show the way. It goes without saying that novel pharmacological agents of this sort should have considerable potential for therapy of inflammatory and allergic diseases in which the leukotrienes are so strongly implicated.

Robin Hoult